

Amendments to the claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-13. (Cancelled)

14. (Previously Presented) A method for producing a vertical magnetic recording medium, the method comprising the step of:

bringing a surface of a master information carrier in close contact with a surface of the vertical magnetic recording medium, the surface of the master information carrier having an information signal according to a figuration pattern of an array of ferromagnetic thin films that are deposited on a surface of a substrate, and applying a magnetic field thereto, so as to record the information signal corresponding to the array of the ferromagnetic thin films as magnetization information in the vertical magnetic recording medium,

wherein the magnetic field is applied in a direction parallel to surfaces of the ferromagnetic thin films and a surface of a magnetic layer of the vertical magnetic recording medium.

15. (Previously Presented) The method according to claim 14, further comprising the step of:

erasing magnetization of the vertical magnetic recording medium to a neutral point at least either by applying a magnetic field alternately in opposite directions or through application of a thermomagnetization method, prior to the step of bringing the surface of the master information carrier in close contact with the surface of the vertical magnetic recording medium.

16. (Currently Amended) The method according to claim 14, further comprising the step of:

magnetizing the vertical magnetic recording medium uniformly in a direction vertical to the surface of the magnetic layer of the vertical magnetic recording medium by applying a d.c. magnetic field to the in-plane magnetic recording medium, prior to the step of bringing the surface of the master information in close contact with the surface of the in-plane magnetic recording medium and applying the magnetic field thereto.

17. (Previously Presented) The method according to claim 14, wherein the ferromagnetic thin films have either a thickness of not more than a bit length of a digital information signal to be recorded in the vertical magnetic recording medium or a thickness of not more than a half of a shortest recording wavelength of an analog information signal to be recorded in the vertical magnetic recording medium.

18. (Previously Presented) The method according to claim 14, wherein the magnetic field is provided using a magnetic transcription head arranged in a vicinity of a back face of the master information carrier,

the method further comprising the step of:

shifting the magnetic transcription head relative to the master information carrier while maintaining a constant distance between the magnetic transcription head and the back face of the master information carrier in a state in which the surface of the master information carrier and the surface of the vertical magnetic recording medium are in close contact with each other, so that the magnetic field is applied over a region that requires the magnetic field, and

separating the magnetic transcription head at a predetermined position farther from the master information carrier, after the step of shifting the magnetic transcription head.

19. (Previously Presented) The method according to claim 18, wherein the magnetic transcription head is an electromagnet formed by providing a magnetic core made of a ferromagnetic material with a coil winding,

for the step of shifting the magnetic transcription head relative to the master information carrier while maintaining a constant distance between the magnetic transcription head and the back face of the master information carrier, a coil current is supplied to the magnetic transcription head, and

prior to the step of separating the magnetic transcription head farther from the master information carrier, the supply of the coil current is stopped.

20. (Previously Presented) The method according to claim 18, wherein the master information carrier has, on its surface, an area where a figuration pattern of ferromagnetic thin films corresponding to an information signal is formed, and an area where a figuration pattern of ferromagnetic thin films is not formed, and

the step of separating the magnetic transcription head farther from the master information carrier is carried out by moving the magnetic transcription head in a direction vertical to the surface of the master information carrier, at a position where the magnetic transcription head is opposed to the area where a figuration pattern of the ferromagnetic thin films is not formed.

21. (Previously Presented) The method according to claim 18, wherein the master information carrier has, on its surface, an area where a figuration pattern of ferromagnetic thin films corresponding to an information signal is formed, and an area where a figuration pattern of ferromagnetic thin film is not formed, and

the step of separating the magnetic transcription head farther from the master information carrier is carried out by moving the magnetic transcription head in a direction parallel to the surface of the master information carrier, at a position where the magnetic transcription head is opposed to the area where a figuration pattern of the ferromagnetic thin films is not formed.

22. (Previously Presented) A method for producing a vertical magnetic recording medium, the method comprising the step of:

bringing a surface of a master information carrier in close contact with a surface of the vertical magnetic recording medium, the surface of the master information carrier

having an information signal according to a figuration pattern of an array of ferromagnetic thin films that are deposited on a surface of a substrate, and applying a magnetic field thereto, so as to record the information signal corresponding to the array of the ferromagnetic thin films as magnetization information in the vertical magnetic recording medium,

wherein the ferromagnetic thin films are magnetized in a direction parallel to the surfaces thereof, by applying the magnetic field in the direction parallel to the surfaces of the ferromagnetic thin films and a surface of a magnetic layer of the vertical magnetic recording medium, and

the magnetic layer of the vertical magnetic recording medium is magnetized in a direction vertical to the surface thereof, with use of a vertical directional component of a leakage magnetic flux that leaks out between adjacent ferromagnetic thin films.